DEEPWATER

The Integrated Deepwater System Program

INTEGRATED COAST GUARD SYSTEMS
DEEPWATER

Sea-Air-Space

16 April 2003

RADM Patrick M. Stillman
Program Executive Officer

AGENDA

INTEGRATED DEEPWATER SYSTEM (IDS)

- Background
- Update
- System of Systems Solution
- Transformation
- Execution

"The need is real and the time is now"

Global Mission Execution

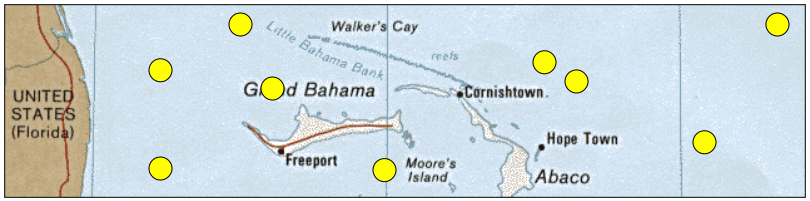
Surveillance

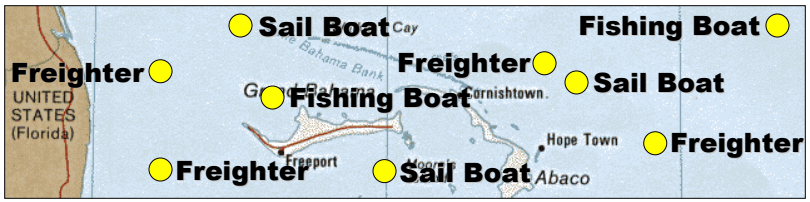
Detection

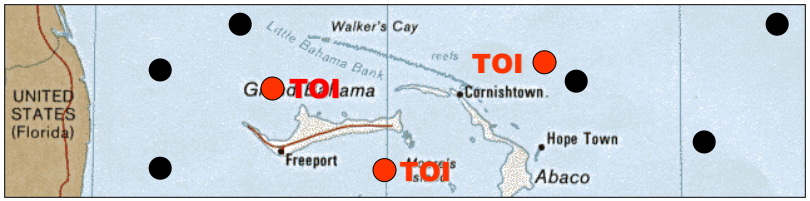
Classification

Identification

Prosecution







TOI = Target of Interest

Homeland Security Strategy

Comprehensive National Strategy

Deepwater Mission Task Sequence	*Coast Guard Maritime Homeland Defense Strategy*	*National Strategy for Homeland Defense*
Surveil	**Conduct layered maritime security operations**	**Prevent Terrorist Attacks within the United States**
Detect	**Establish & maintain a baseline level of maritime security**	
Classify	**Strengthen the port security posture**	**Reduce America's Vulnerability to Terrorism**
Identify	**Build & leverage Maritime Domain Awareness**	
Prosecute	**Develop required capabilities, improve core competencies & recapitalize the CG**	**Minimize the Danger and Recover from the Attacks that do Occur**
	Organize & sustain a public private sector partnership; increase international partnership	
	Prepare, equip & train forces to transition between & conduct HLS & HLD ops	

Operation Iraqi Freedom

Coast Guard High Endurance Cutter BOUTWELL and DALLAS have deployed to the Arabian Gulf/Middle East to perform essential warfare tasks.

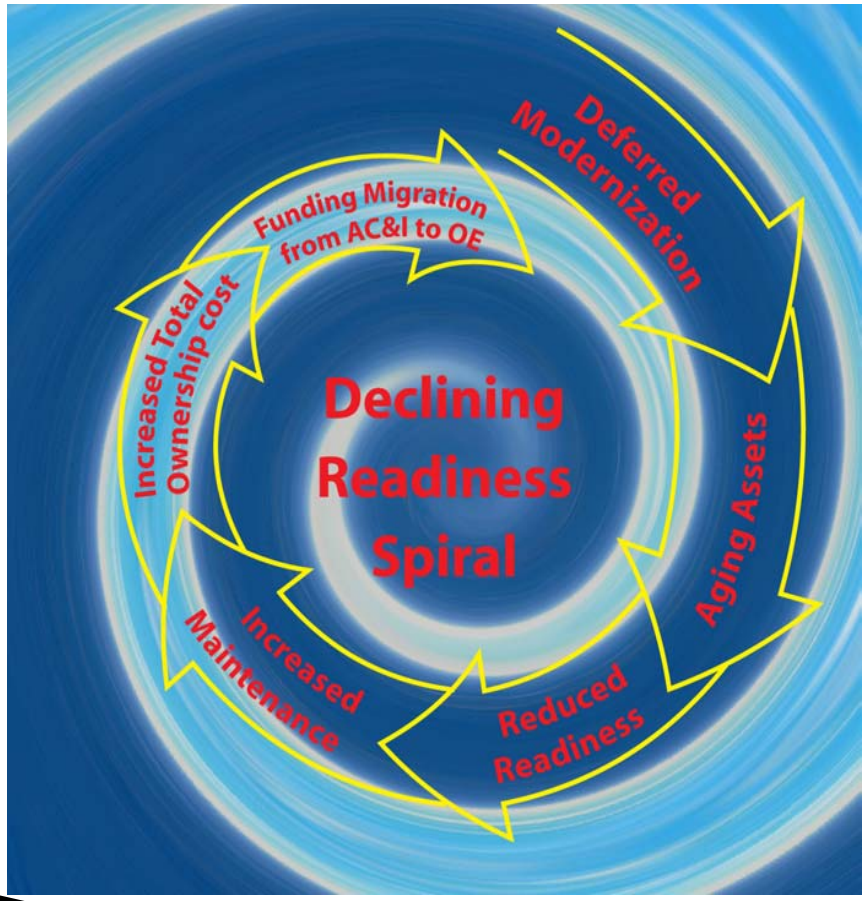
The Coast Guard is deploying eight 110-foot cutters with support form Reserve Machine Technicians.

The Coast Guard is deploying four Ports Security Units and two Mobile Support Units.

"Whether in war, national crises or 'peace steaming,' we will answer the call."

Coast Guard Commandant
ADM. Thomas Collins

Current Coast Guard Capabilities



Year First Commissioned

Expiration of Planned Service Life

Partnership

- **Contract awarded 25 June 2002 to Integrated Coast Guard Systems (ICGS), a joint venture between Lockheed Martin and Northrop Grumman**

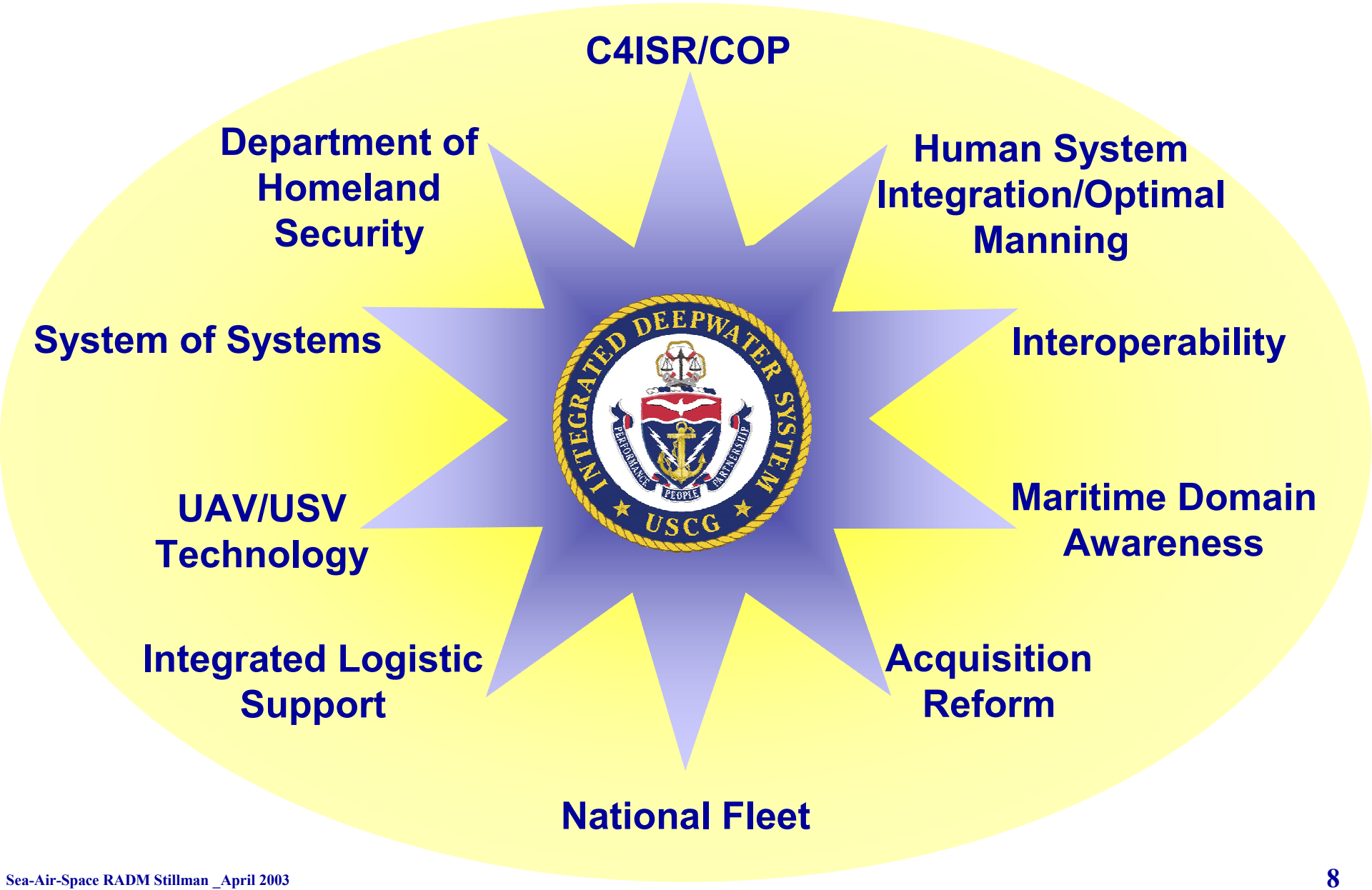
LOCKHEED MARTIN

NORTHROP GRUMMAN

ARINC
Bell Agusta Aerospace Corp.
Bell Helicopter Textron
EADS CASA
EADS Eurocopter
Halter – Bollinger
L3 Communications
LM Management & Data Systems
LM Technology Services
M. Rosenblatt & Sons
Northrop Grumman Full Service Operations
Northrop Grumman IT
PROSOFT
United Defense, LP

People, Performance, and Partnership

Acquisition Transformation



System Solution – Network Centric

Homeland Security/Defense Continuum

MDA

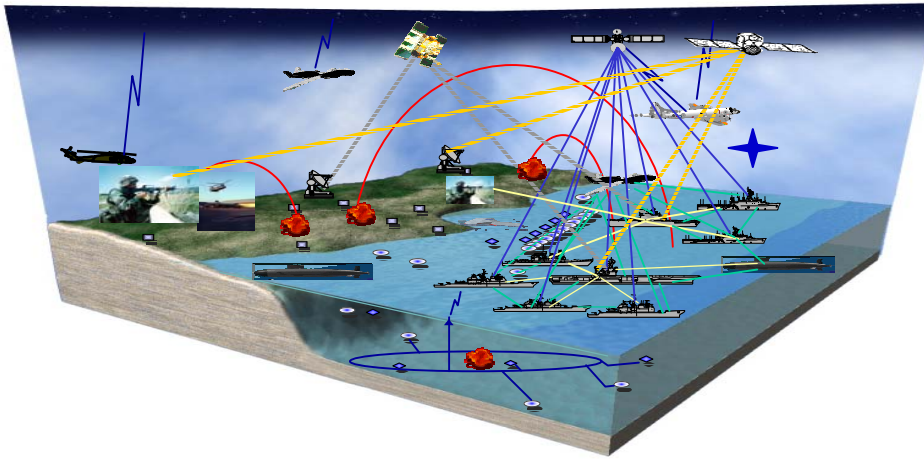
Enhancing Maritime Domain Awareness through fully interoperable network-centric architecture

Integrates the power of System of Systems with net-centric technology

Homeland Security

FORCEnet

Integrating sensors from seabed to space



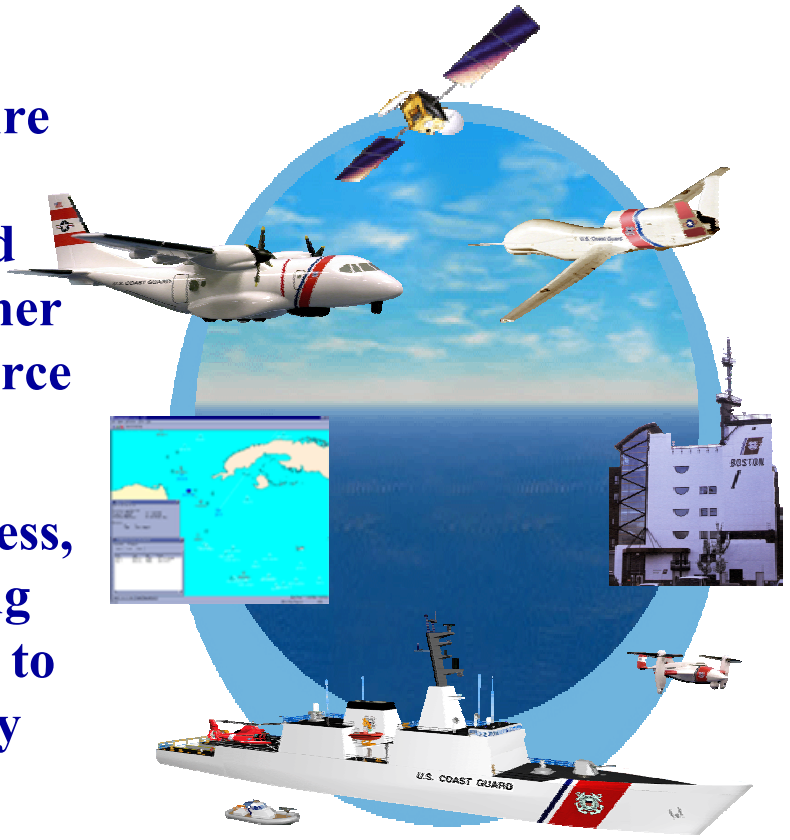
Integrates the power of people, sensors, weapons, networks, and platforms

Homeland Defense

Maritime Domain Awareness

The Deepwater C4ISR system, a key component in Coast Guard to develop a capability for improved maritime domain awareness, focused on meeting information needs of operational decision makers and tactical commanders engaged in operations at sea, ashore, and in the air.

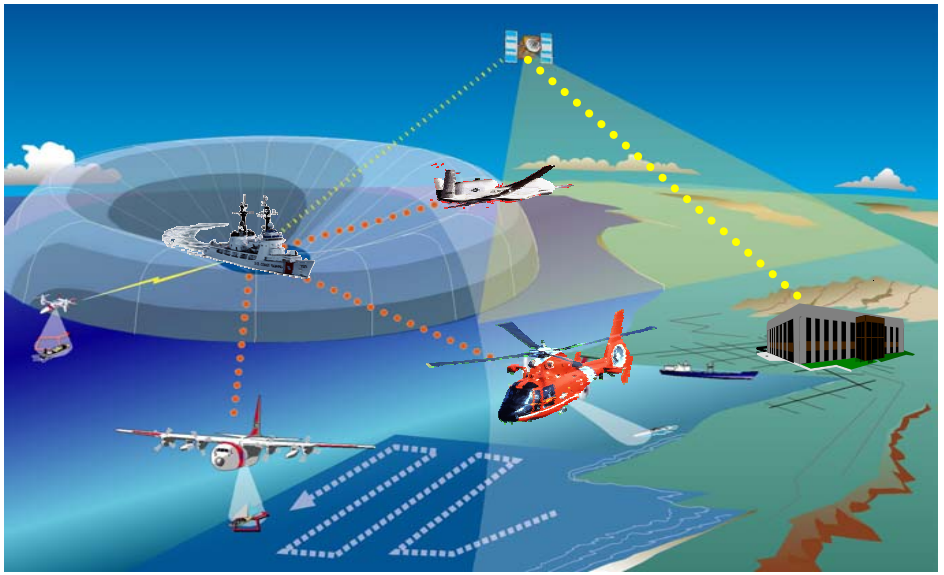
- **Network-centric system is designed to ensure seamless interoperability with forces and agencies of the Departments of Defense and Homeland Security and a wide range of other federal, state, and local agencies—a true force multiplier.**
- **Contributions to maritime domain awareness, Deepwater's C4ISR system is a key building block in enabling operational commanders to share a common operational picture so they can employ forces most productively and manage risk wisely.**



Littoral Combat Ship

- Cooperative effort supporting the National Fleet Policy
- Seamless interoperability for a network-centric system
- Common technologies, systems, and process.
- Areas of synergy
  - Navy leverage off Coast Guard: UAV, Stern launch, Combat System development, ongoing crewing analysis
  - Coast Guard leverage off Navy: Combat Systems Suite, Maritime Crypto Element
  - Navy/Coast Guard work in tandem: ConOps development, modularity

The Deepwater C4ISR



Improved maritime domain awareness focused on meeting the information needs of operational decision makers engaged on operations at sea, ashore and in the air.

Capability Improvements

- **A network-centric system architecture.**
- **Seamless interoperability**
- **Surveillance, detection and monitoring**
  - **Capable of determining what and/or who resides, enters and exits in the Deepwater area of operational responsibility**
- **Internal and external information exchange**
  - **Maintain simultaneous real-time voice, and video and date communication between all Coast Guard assets, DHS, DOD, federal, state and local agencies, NATO and similar coalitions**
- **Situational Awareness**
  - **Awareness of the operating environment to include fusion local tactical information with database information in near real time.**
- **Imbedded technical refresh to obviate future obsolescence.**

National Security Cutter Characteristics

National Security Cutter [Delivery 2006 – 2013]

Endurance/Range	60 Days / 12,000 nmi	Length	421 ft, LOA
Fuel	650 tons	Beam	54 ft
Crew, OFF/CPO/ENL	18/12/88	Draft	20.9 ft
Propulsion Plant	CODAG	Displacement	3,886 tons, Full Load
Electric Plant	2 SSDGs + 1 Emergency Gen	Speed	28.1 kts (Sustained at 85% MCR) 29.1 kts (Max at 100% MCR)
Ship Control	Integrated Bridge		

National Security Cutter

- Material task ordered issued March 03
- Detail design ordered issued March 03
  - Combined cost $130m
- Critical design review in June 03
- Detail design work at Avondale shipyard performed by Northrop Grumman Ship Systems
- Construction to start summer 04 with steel cutting
  - Estimated delivery 2006

110'-123' WPC Conversion

- **USCG WPB Fleet Condition & Remaining Service Life Study dated 31 Jan 2001 – Study conducted by CSC Advanced Marine**
- **USCGC MATAGORDA is the first of 49 110' WPBs to begin the Deepwater modernization process.**
- **CGC MATAGORDA arrived in Lockport, LA on 2 February 2003. The cutter is scheduled to be in the shipyard for 8months. In the future, it is anticipated a 123' will be delivered to the fleet approximately every eight weeks.**

Maritime Patrol Aircraft (MPA) Characteristics

EADS CASA 235-300M "Persuader" MPA – Delivery 2006-2012

General Characteristics

Length	70 ft 1 in
Wing Span	80 ft 5 in
Cabin Length	31 ft 6 in
Cabin Height	6 ft 1 in
Cabin Width	8 ft 9 in
Maximum Take-off Weight	36,380 lb
Maximum Landing Weight	36,380 lb
Maximum Payload	11,200 lb
Fuel Capacity	1,379 gal
Number of 88" x 108" Pallets	2
Maximum Cruising Speed	240 ktas

- Proven Military Twin Turboprop
- Extended Range Fuel System
- In Service as MPA
- Most Cost-Effective MPA Alternative
- Palletized Fully Integrated Tactical System
- Quick Change to Cargo or Passenger Role
- Rear Cargo Ramp

Take-off Distance to 50 ft (S/L, ISA, MTOW)	3,360 ft
Landing Distance from 50 ft (S/L, ISA, MTOW)	2170 ft
Maximum Range	2,224 nm
Range with 4000 kg Payload (8800 lb)	1,030 nm
Engines	2 x General Electric CT7-9C3 turboprop engines
Propellers	Hamilton Standard 14RF-37 (Four Bladed)

Vertical Unmanned Air Vehicle Characteristics

Bell HV-911 "Eagle Eye" VTOL Unmanned Air Vehicle

Flight-Ready Configuration

General Characteristics

- All Composite Construction
- Fully Shipboard Deployable
- Low Maintenance (<1 MMH/FH)
- Up to 4 VUAVs per NSC or OPC
- Modular Mission Payloads (FLIR/EO, Radar, etc.)
- High Speed Dash (220 kts), Cruise (200 kts)
- Airplane Loiter (90 kts)
- 5.9 Hour Endurance
- Maximum Height 5.7 ft
- Maximum Length 17.23 ft
- Maximum Wing Span 23.6 ft

Stowed Configuration

Continuing Challenges

- Evolving threat
- Life-cycle management; legacy asset sustainment
- Funding Sustainment
- Interoperability
- System of Systems

The Bottom Line

Providing the Best Equipment for the World's Best Coast Guard